

MONTHLY REPORT

1 September 1961 - 30 September 1961

RESEARCH AND DEVELOPMENT BRANCH  
ENGINEERING STAFF

RESEARCH AND DEVELOPMENT LABORATORY

PROJECTS AND ACTIVITIES

2001-90 TELETYPE TEST MESSAGE KEYER [REDACTED]

25X1A9a

Fabrication of the prototype is about 50% complete.

2001-105 MODIFICATION OF TELETYPE PARTS [REDACTED]

25X1A9a

Twelve parts were completed and delivered on 12 September 1961. This project is complete.

2004-198 350 WATT LINEAR AMPLIFIER, PAL-350 (EVALUATION) [REDACTED]

25X1A9a

25X1A9a

Tests are about two-thirds complete. Results of tests so far indicate that the unit conforms to the manufacturer's published data in all areas tested. The output of the multipliers of the RT-27 is not enough to drive the amplifier.

2004-199 MOTOROLA P-33 HANDIE-TALKIE RADIOPHONE EVALUATION [REDACTED]

25X1A9a

Tests on this unit have just begun. Insufficient data are available at this time to permit any conclusive statements concerning test results.

2007-63 PORTABLE HF DIRECTION FINDER [REDACTED]

25X1A9a

Ten production units of the PS-12 power supply for use with the DAG-1 or DAG-2 have been completed.

2007-71 TINY TOT MODIFICATION [REDACTED]

25X1A9a

Drafting work is continuing on circuit and wiring diagrams.

2007-73 USE OF KE-8 KEYER WITH FSS TRANSMITTER [REDACTED]

25X1A9a

A prototype adapter unit which contains a transformer/rectifier/zener supply operating from the FSS-7 filament voltage and a controlled-switch high voltage keying circuit has been built. Parts for a production run of twenty units are now on order. Complete environmental experiments with the prototype must await availability of a KE-8 production unit.

25X1A9a      2037      AGENT HIGH-SPEED COMMUNICATIONS SYSTEM, RS-16

[REDACTED]

All of the RS-16 units are being refurbished, repaired and being placed in first class operating condition. Work is about 50% complete.

25X1A9a

25X1A      2045      AUTOMATIC TAPE PRINTER - TP-3 FABRICATION

[REDACTED]

Forty-two units have been completed and delivered to warehouse stock. This project is now complete.

2099-112      CV-13B CONVERTER PRODUCTION

25X1A9a

[REDACTED]

Twenty units are in production and the estimated completion date is October 15.

2131      MINIATURE THREE-CHANNEL TAPE RECORDER, CB-3

25X1A9a

[REDACTED]

Tests on the CB-3 and CB-4 are complete. The report is being written. Generally, the performance of the CB-3 and CB-4 is satisfactory. Notable deficiencies are:

- a. The plastic belt of the take-up reel capstan fell off twice during the evaluation.
- b. The take-up reel of the CB-3 rubs against the top cover.
- c. Several of the control knobs on the CB-4 are not fastened securely to the shafts.
- d. The raw noise output of the mixing channel is high.
- e. Some feed-through from the 1 kc oscillator was noted. Aural noise of the CB-3 motor should be reduced.

2137      MAGNETIC CODER/KEYER, KE-8

25X1A9a

[REDACTED]

Production checkout of ten electronics packages is nearing final stages. Cases for seven units are on hand and are being readied. There are indications that a separate adaptor of a simple nature may yet be required for use of the KE-8 with the RT/C-11 transmitter, in spite of efforts to extend the voltage limit of the KE-8 keying circuit beyond 45 volts.

2164 RT-42 TRANSMITTER EVALUATION [REDACTED]

25X1A9a

Tests are complete on this unit with the exception of the modified antenna coupler system.

2193 BARKER CODE CONVERTER, CV-17 [REDACTED]

25X1A9a

A printed circuit board has been processed for the mounting of a 5-stage and an 11-stage shift register with appropriate gate circuits. Effort will now be directed toward the design of high accuracy timing circuits.

2523 CS-24 SYSTEM FABRICATION [REDACTED]

25X1A9a

Five spare interchangeable BT-9 motor brush housings per unit have been received which fulfills all BT-9 requirements necessary to complete the CS-24 systems. Fourteen CU-8 Signal Actuate Devices have been delivered. Efforts can now be directed toward BT-9 hash suppression and completion of the CS-24 systems.

2529 OFF-LINE KEYERS, CK-14 & CK-15 [REDACTED]

25X1A9a

CK-14: Techniques of layout and a new switch design which eliminates much wasted space within the engineering prototype are being considered, with a goal of reducing overall size to one and one-half king-size cigarette packs in the production model. The readout device would, in this approach, become a separate accessory, occupying an additional half-pack.

CK-15: The breadboard has now been completed and it has been used to key a teletype machine. Final tests are now being conducted.

2532 ONE WATT TRANSMITTER, RT-38 [REDACTED]

25X1A9a

The transmitter printed circuit boards have been completed during this period.

2533 BODY CONCEALABLE ANTENNA [REDACTED]

25X1A9a

Most of the activity on this project at present has been on investigation of test instrumentation techniques for various low frequency antennas.

Two antennas, the cylindrical slot and the cylindrical whip, are being investigated for their feasibility as body antennas. Only tentative test data has been collected so far.

~~SECRET~~

2547 ONE-TIME PAD MATRIX, HL-6 [REDACTED]

25X1A9a

Fabrication of the HL-6 engineering model has been completed and the unit is in the final test stage.

2554 TRANSISTORIZED RECEIVER, CRYSTAL-CONTROLLED [REDACTED]

25X1A

25X1A

An eight-transistor, four-channel, crystal-controlled receiver packaged in a CV-2A case with a 1-1/2 V penlight cell and a CV-5 converter fitted with choke output coupling (couples directly into a ferrite loop of small broadcast receiver without inter-connecting wires) has been delivered for inspection and test.

2555 MIGRAINE SYSTEM [REDACTED]

25X1A9a

The temperature chamber test has been completed on the power supply. Transmitter printed circuit boards have been redrawn to incorporate a different antenna coupler.

2556 RR-22 RECEIVER FABRICATION [REDACTED]

25X1A9a

Mechanical fabrication on the prototypes of the power supply and the converter are nearing completion. Fabrication will begin on the prototypes for the remaining sections during the next period.

2557 PS-5 POWER SUPPLY FABRICATION [REDACTED]

25X1A9a

Twenty-five units were completed and delivered to the warehouse on 27 September 1961. This project is complete.

2559 TELETYPE CIRCUIT SELECTOR, CU-12 [REDACTED]

25X1A9a

25X1A

One prototype and four production models of the CU-12 were completed and delivered to SEB on schedule - 25 September 1961.

2560 RECHARGEABLE POWER SUPPLY FOR RS-1 OR RS-6 [REDACTED]

25X1A9a

Appropriate Ni-Cad batteries have been placed on order. Design of the DC-DC converter has been completed and is being built.

~~SECRET~~

25X1A2d1

2561 [REDACTED] (PACKAGING OF RT-42 AND ASSOCIATED EQUIPMENT)

25X1A9a

A CRASH project to repackage the RT-42 transmitter with batteries, antenna coupler, and KE-8 keyer was undertaken and completed during the last week of this period. A base station to receive transmission from the above field system is comprised of a modified CU-11, a modified Spotmaster (recorder-playback unit) and a modified CFT 901 receiver. Completion of the base station was completed over the 20 September weekend.

25X1A5a1

2562 [REDACTED] TRANSMITTER [REDACTED]

25X1A9a

The first two units were built and delivered as per schedule; four additional units will be assembled next period.

The following projects were completed and the reports distributed this month:

25X1A5a1

2004-196 [REDACTED] VFC Evaluation

Completed A&A Projects - reports in process of being published and distributed:

25X1A5a1

2004-188 [REDACTED] System Evaluation  
2005-124 Transistorized Communications Receiver, FE-8, Evaluation  
2070-7 Infrared Communication System IS/A-5 (Evaluation)

The following projects had no activity this month:

2001-96 RS-1 Desicator Tube  
2001-106 Assembly of Tiny Tot Heads  
2004-190 CK-7 Mechanical Evaluation  
2004-195 Nickel Cadmium Battery Tester Evaluation  
2004-197 Collins Antenna Tuner Evaluation  
2005-125 DC-DC Converter for FSS-7  
2007-1 Maintenance of Radiation Detection Equipment  
2007-59 KE-17 Keyer  
2007-61 Circular Intercept Antenna Evaluation  
2007-62 Miniature Tape Recorder Evaluation  
2007-64 Receiver Radiation Investigation  
2007-65 Investigation of Low-Frequency Warning Transmitter (Cave Mapping)  
2007-66 Spring Motor Drive for CA-3 Cartridge  
2007-70 RR-22 Calibration and Modification  
2097 Agent Triphase Communications Set, RS-18

2108-1 Agent Automatic Station, AS-3 (Evaluation)  
2108-2 Agent Automatic Station Transmitter, AT-3 (Evaluation)  
2540 Sub-Base QFM Reader-Exciter, AT-10  
2545 Transistorized High Frequency Receiver  
2546 BN-4 Pulse Beacon  
2550 Low-Frequency Modulation Identification Adaptor  
2551 Frequency Range Extension, RT-3  
2558 AS-3 Base Station Modification  
2671A-2 4-10 KMC Microwave Receiver, CR/A-36 (Evaluation)  
2675 Word Synthesizer, SY-1 (Evaluation)

25X1A9a

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